

**Faculty:** Mathematics, Informatics and Natural Sciences

**Institute:** Hamburg Observatory

We offer one PhD position within the project “Fossil fields in Ap/Bp stars: an origin from star formation and protostellar evolution“ funded by the German Science Foundation (DFG).

This research project focuses on the exploration of the origin of magnetic fields in radiative Ap/Bp-type stars, where stellar dynamos cannot operate due to the absence of convection. Instead we explore a possible fossil origin with magnetic fields resulting from the star formation process. These magnetic fields then also need to survive the phase of protostellar evolution. This project aims to make significant advances on this topic pursuing multi-physics high-resolution simulations of intermediate-mass star formation to arrive at predictions for the expected strength of fossil magnetic fields, and subsequently to assess their possibility of survival during the protostellar evolution phase, considering the possible decay of magnetic fields due to their interaction with the convective phases of the protostar. This multi-disciplinary project will be pursued in international collaboration with partners in Rome (Sapienza University, Prof. Dr. Dominik Schleicher), Freiburg (Institute for Solar Physics, Dr. Petri Käpylä) and Florence (Prof. Dr. Daniele Galli, INAF Astrophysical Observatory of Florence). The advertised PhD project will focus on the latter part, i.e. study the long-term evolution of magnetic fields during the convective protostellar phase with state-of-the-art 'star-in-a-box' simulations.

The PhD position will be located in Hamburg but include the possibility of international collaboration and mutual (also extended) visits. We seek students who are interested in international and multi-disciplinary collaboration and with strong interest in numerical modeling and multi-disciplinary work.

**Application details:**

Please send your application with the usual documents (cover letter, curriculum vitae, university degree certificate) to [banerjee@hs.uni-hamburg.de](mailto:banerjee@hs.uni-hamburg.de) before **May 15th, 2026**.

For further information, please contact Prof. Dr. Robi Banerjee, UHH, Hamburger Sternwarte, [banerjee@hs.uni-hamburg.de](mailto:banerjee@hs.uni-hamburg.de)